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REPORT NO. 12

**Cotton Fiber and Processing Test Results**

CROP of

**1974**



Agricultural Marketing Service  
U.S. DEPARTMENT OF AGRICULTURE  
Memphis, Tenn. 38122 January 17, 1975

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.<sup>1/</sup> These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

<sup>1/</sup> Summary of Cotton Fiber and Processing Test Results, Crop of 1973, USDA, AMS, Cotton Division, May 1974.



## COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1974

### Discussion of Test Results

Cotton Division laboratories of the Agricultural Marketing Service, USDA, report cotton fibers tested from the Southwest short staple samples, to date, are less uniform, and finer than through the same period a year ago. Shirley Analyzer nonlint content and picker and card waste are higher than a year ago. Yarns spun from these samples show lower appearance grades and higher imperfection count than last year.

Averages for all medium staple samples tested through January 10 show fibers to be finer and slightly stronger at 1/8" gage strength tests. Picker and card waste is higher than a year ago. Yarns spun from these samples show fewer imperfections this year.

Medium staple samples from the Southeast tested finer than through the same period a year ago. Picker and card waste is higher. Yarns spun from these samples show fewer imperfections.

Medium staple samples tested from the South Central belt show finer and stronger fibers for both zero and 1/8" gage tests. Picker and card waste is higher. Yarns spun from these samples show stronger skein strength, while appearance grades are lower than last season.

Southwest medium staple samples tested to date are finer and stronger at both zero and 1/8" gage tests than a year ago. Picker and card waste is higher than last season. Yarns spun from these samples show lower appearance grades.

Medium staple samples tested from the West show fibers to be slightly coarser than last season. Picker and card waste is higher.

Average for all long staple samples tested, to date, show fibers to be finer than a year ago. Yarns spun from these samples show weaker combed yarn strength than last season. Yarn appearance grades averaged below that of last season at this time for both carded and combed yarns. Yarn imperfections for carded yarns are higher than a year ago.

Long staple samples from the Southeast showed fibers tested longer, less uniform and finer than a year ago. Yarns spun from these samples show lower appearance grades for both carded and combed yarns. Yarn imperfections are higher than last season for both carded and combed yarns.

No additional long staple samples were received from either the South Central or West during this report period.

Extra long staple, American Pima, samples from the West show fibers to be finer, and weaker at 1/8" gage tests than last season. Shirley Analyzer non-lint content and comber waste are less than a year ago. Yarns spun from these samples show weaker yarn strength. Appearance grades are lower, while yarn imperfections are fewer than last season at this time.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States  
1/ through January 10, 1975

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results					
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.	
		2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Skein str.	Appearance	Imperf- ections		
No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	Yarn No.		
<u>Short Staple:</u>													
Southwest													
1973	60	.97	46	4.5	83	21	3.3	6.3	91	108	16	42	
1974	42	.96	44	3.8	83	21	4.1	7.4	90	91	27	40	
<u>Medium Staple:</u>													
Southeast													
1973	54	1.08	46	4.5	82	22	3.6	6.0	101	105	21	61	
1974	50	1.09	45	4.3	81	22	3.4	6.5	102	103	19	61	
South Central													
1973	165	1.10	45	4.5	81	22	3.1	5.8	101	107	19	61	
1974	128	1.10	44	4.0	83	23	3.2	6.3	105	102	18	63	
Southwest													
1973	50	1.07	45	4.3	82	22	3.0	5.7	98	97	23	56	
1974	44	1.07	44	4.0	84	23	3.2	6.4	101	87	23	58	
West													
1973	68	1.10	45	4.3	91	25	2.4	5.3	117	101	17	66	
1974	70	1.11	46	4.5	91	25	2.5	6.0	116	103	16	66	
U. S. Average													
1973	337	1.09	45	4.4	84	22	3.0	5.7	104	104	20	62	
1974	292	1.10	44	4.2	85	23	3.1	6.3	106	100	18	63	
Significant dif- ference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3	

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States  
1/ (Continued)  
through

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results								SPY
		Length		Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality				No.		
		Span	Unif		Zero	1/8" gage				carded	Strength	Appearance	Imprfctns			
															comb	
No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.		
<u>Long Staple:</u>																
Southeast																
1973	17	1.12	45	4.6	82	23	3.9	8.6	17.0	103	119	117	124	14	7	65
1974	15	1.15	43	4.0	82	23	4.0	8.7	17.2	104	118	104	110	21	14	67
South Central																
1973	6	1.14	44	4.3	86	24	3.8	8.8	17.3	108	126	117	127	19	8	64
1974	6	1.15	44	4.0	85	23	4.0	8.8	18.0	105	125	102	113	19	8	65
West																
1973	14	1.15	45	3.6	92	27	2.6	7.6	15.4	134	152	95	106	18	10	90
1974	12	1.16	45	3.7	93	26	2.6	7.2	15.1	128	148	95	106	20	9	89
U. S. Average																
1973	37	1.14	45	4.2	86	24	3.4	8.2	16.4	116	133	109	118	17	9	74
1974	33	1.15	44	3.9	86	24	3.5	8.2	16.1	113	128	100	107	20	8	75
<u>Array</u>																
American Pima																
<u>50's Combed Yarn</u>																
Extra Long Staple:																
West																
1973	16	1.46	31	3.8	101	33	3.3	8.0	18.4	67	122				9	
1974	15	1.45	32	3.6	100	32	2.8	7.8	17.8	64	110				2	
Significant																
Difference 2/																
0.02 2 0.2 2 1 0.5 0.5 0.5 4(22s) 5 5 2 2 3																
4(22s) 2(50s)																

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.



Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1974

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Name & Code	Stple 32s	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Potent-ial	
				2.5% span	Unif		Zero Gage	1/8" Gage			Gra	Yel		8s or 74 tx	22sor 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx		
						In			Pct	Rdg			Mpsi										G/tex
SOUTHWEST AREA																							
NORTHWEST TEXAS																							
ANSON																							
2	SLM	LT SP	42 31	.98	45	4.1	82	21	LANKART 611	3.5	5	3	7.0	300	91	7.6	6.7	110	90	47	26	43	
HART																							
2	LM	LT SP	52 31	0.96	42	2.5	75	20	STRIPPER 31	6.9	3	4	8.6	322	98	8.6	7.3	80	70	99	59	44	
3	LM	LT SP	52 30	0.95	45	2.6	82	21	6.8	5.0	3	4	9.4	320	97	8.3	7.2	90	80	68	40	43	
KNCTT																							
1	SLM	LT SP	42 30	0.94	45	3.9	80	19	WESTERN STORMPROOF	5.0	4	4	8.4	261	82	6.2	5.3	120	100	32	16	35	
2	MID	SP	33 30	0.94	43	3.6	83	19	5.2	3.4	3	4	7.4	280	81	6.2	5.3	130	90	25	12	35	
PADUCAH																							
1	MID		31 31	0.97	43	3.9	80	20	LANKART 611	2.0	2	4	5.4	314	92	7.8	6.7	120	100	25	14	40	
PLAINVIEW																							
2	SLM	LT SP	42 31	0.97	40	2.7	79	20	PAYMASTER 18	4.0	2	4	7.4	319	98	8.6	7.3	90	70	79	49	42	
3	LM	LT SP	52 31	0.94	45	2.5	73	21	7.5	6.7	2	4	8.6	319	92	8.0	6.9	100	70	83	37	40	
RALLS																							
3	LM	LT SP	52 30	0.94	41	2.4	78	21	STRIPPER 31	6.3	2	4	9.4	316	96	8.2	7.2	90	60	103	71	39	
SEAGRAVES																							
2	SLM	LT SP	42 29	0.91	46	4.1	81	20	PAYMASTER 18	3.1	2	3	7.2	256	74	6.2	5.4	110	90	31	17	29	
3	LM		51 29	0.90	45	3.3	77	19	6.3	4.2	2	3	8.0	287	83	7.2	6.4	120	90	44	24	33	
TULIA																							
3	SLM	LT SP	42 31	0.95	44	3.1	80	21	STRIPPER 31	5.0	2	3	8.0	327	99	8.3	6.8	110	110	40	20	44	
OKLAHOMA																							
CARNEGIE																							
2	SLM	LT SP	42 32	1.02	44	4.2	79	23	LANKART 57	3.8	2	4	7.0	312	95	7.6	6.4	110	90	43	18	46	

1/ Reduced from 42 because of bark

2/ Reduced from 41 because of bark



Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974

Production Area, Classification &				Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number				Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Poten- tial	
No	Grade	Style		Unif. span			Zero Gage	1/8" Gage			Gra	Yel		Pct	No	Pct	Lbs	Pct	Pct	22s or 27 tx	50s or 12 tx		22s or 27 tx
Name & Code				32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Pct	Pct	No	No	No	No	No	
SOUTHEAST AREA																							
ALABAMA																							
PRATTVILLE																							
4	SLM	41	35	1.11	43	4.0	86	23	5.5	2.6	2	3	6.5	107	37	5.6	4.4	90	70	16	15	61	
ST CLAIR																							
4	SLM	41	34	1.08	45	4.3	79	21	6.4	2.8	2	3	6.4	98	30	6.7	4.1	90	80	15	11	58	
SOUTH CENTRAL AREA																							
ARKANSAS																							
DUMAS																							
4	SLM	41	35	1.07	42	3.4	85	20	5.9	3.9	2	2	6.2	102	35	6.5	4.5	90	70	16	14	64	
EUDORA																							
4	SLM	41	34	1.09	44	3.9	78	20	7.3	3.5	2	2	5.8	103	35	6.6	4.7	90	70	12	7	62	
HUGHES																							
4	LM	51	35	1.06	41	3.0	80	21	6.8	3.6	2	2	5.6	91	31	6.4	4.8	70	60	22	16	52	
MARIANNA																							
4	LM	51	34	1.06	44	3.8	81	21	6.5	3.8	3	2	7.3	92	29	5.7	4.3	100	70	12	13	54	
MISSISSIPPI																							
GUNNISON																							
3	SLM	41	35	1.11	42	3.7	80	23	7.8	2.7	1	2	5.8	106	36	7.3	5.2	80	70	17	21	62	
TRI8BETT																							
3	LM	51	35	1.07	44	3.6	84	22	5.2	4.6	3	1	7.2	102	33	5.6	3.9	100	80	16	13	61	

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S. A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent- ial	
				2.5% span	Unif.		Zero	1/8" Gage			G/tex	Pct		Pct	Gra	Yel	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx		50s or 12 tx
SOUTHWEST AREA																							
NORTHWEST TEXAS																							
LUBBOCK																							
3 LM	512/ 35		1.13	41	3.2	85	24	312	6.3	6.0	2	3	8.23/	100 PERCENT 1/	107	37	6.5	5.1	60	60	35	39	51
LUBBOCK																							
3 SLM	41	34	1.10	41	3.2	83	22	5110	6.5	3.4	2	3	6.8	100 PERCENT 1/	99	34	6.3	4.8	70	60	30	28	57
CLTON																							
3 SLM LT SP	42	33	1.04	42	2.5	86	25	119	6.8	4.8	2	3	8.3	85 PERCENT	113	41	7.2	5.3	70	60	37	31	64
ROPEVILLE																							
3 SLM	41	33	1.05	43	2.9	82	22	4789A	7.0	3.0	1	3	6.7	100 PERCENT	99	31	6.7	4.7	80	60	34	28	54
WEST AREA																							
ARIZONA																							
BUCKEYE																							
3 SLM	41	35	1.10	44	4.9	89	22	213	4.9	2.6	2	2	7.7	100 PERCENT	95	30	5.3	3.9	120	90	11	11	50
PALO VERDE																							
3 SLM	41	35	1.09	44	4.8	90	23	16	6.1	2.4	2	2	6.2	83 PERCENT	91	28	5.3	4.2	90	80	13	12	44
SCHERTON																							
4 SLM	41	35	1.13	44	5.0	84	23	61	6.5	2.5	2	2	6.3	92 PERCENT	103	34	6.3	4.0	100	80	19	15	58
WEST TEXAS																							
PECOS																							
3 LM	51	34	1.07	42	3.7	79	22	213	7.2	4.8	2	2	8.2	100 PERCENT 1/	100	33	6.2	4.5	100	70	19	14	55

1/ 100 percent selected for tests, less than 100 percent in the area  
2/ Reduced from 41 because of bark  
3/ Cotton stuck to processing rolls

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1974

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number		Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C and Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent- ial	
				2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx		
No	Grade	Name & Code		In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No	
SOUTHEAST AREA																							
GEORGIA																							
MADISON																							
51	34	1.15	43	4.2	86	23	COKER 310	6.4	6.0	3	3	11.5	100 PERCENT	97	32	6.0	4.5	90	70	35	24	59	
												*	17.2	118	42	6.7	5.1	110	90	14	11		
WEST AREA																							
NEW MEXICO																							
ARTESIA																							
41	36	1.17	43	3.7	95	26	ACALA 1517 70	5.7	2.5	2	2	7.8	70 PERCENT	126	45	6.0	4.5	100	70	17	10	85	
												*	17.3	149	55	6.5	4.8	100	100	10	6		
WEST TEXAS																							
EL PASO																							
41	36	1.17	44	4.0	98	27	ACALA 1517 C	5.3	3.4	2	2	7.7	100 PERCENT 1/	126	45	5.6	4.7	90	70	17	13	88	
												*	14.8	149	54	6.5	5.0	110	100	8	5		

1/ 100 percent selected for tests, less than 100 percent in the area  
 \* Comber Waste and Combed Yarn Data

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1974

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns									
No		Grade	Stple	Array Length		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns		
				UQL	CV		Zero Gage	1/8" Gage			Gra	Yel			50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx			
				In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	
				32s																		No	
WEST AREA																							No
ARIZONA																							No
BOWIE																							No
3	4	44		1.43	33	3.2	95	32	7.7	2.5	4	6	9.1	17.5	100 PERCENT	62	34	5.8	4.8	110	110	3	3
CASA GRANDE																							
2	4	44		1.48	32	3.8	101	32	6.8	2.5	4	5	9.5	18.0	100 PERCENT	67	35	5.4	4.4	110	110	2	1
QUEEN CREEK																							
2	3	44		1.47	32	3.7	101	33	6.6	2.7	3	5	7.4	18.1	100 PERCENT	66	36	5.6	4.8	110	120	1	0
NEW MEXICO																							
LAS CRUCES																							
3	4	44		1.39	36	3.1	97	28	6.9	4.2	4	5	8.8	20.1	90 PERCENT	62	33	5.6	4.8	110	110	3	1